No. 200200231

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

DEJ International Seeds and Rutgers,
The State University of New Jersey

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, RED

'Navigator'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this seventh day of December, in the year two thousand and five.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
7as DLF
4/7/05 ~~Cebeco~~ International Seeds, ~~Inc.~~ and Rutgers, The State University of New Jersey (ET:8/18/2005)

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
CIS-FRR 5

3. VARIETY NAME
Navigator

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
PO Box 229
Halsey, OR 97348
USA

5. TELEPHONE *(Include area code)*
541-369-2251

FOR OFFICIAL USE ONLY

PVPO NUMBER
200200231

6. FAX *(Include area code)*
541-~~369-2251~~ 929-4087 (ET:8/18/2005)

FILING DATE
August 21, 2002

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Oregon

9. DATE OF INCORPORATION
1972

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Stephen W. Johnson
DLF ~~Cebeco~~ International Seeds, ~~Inc.~~ and Rutgers, The State University of New Jersey (ET:8/18/2005)
PO Box 229
Halsey, OR 97348

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 2705.00
DATE 8/21/2002

CERTIFICATION FEE:
$ 682.00
DATE 10/3/2005

11. TELEPHONE *(Include area code)*
541-369-2251

12. FAX *(Include area code)*
541-~~369-2251~~ 929-4087 (ET:8/18/2005)

13. E-MAIL
STEVEJ@intlseed.com

14. CROP KIND *(Common Name)*
Strong Creeping Red Fescue

15. GENUS AND SPECIES NAME OF CROP
Festuca rubra rubra

16. FAMILY NAME *(Botanical)*
Graminae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

- a. ☒ Exhibit A. Origin and Breeding History of the Variety
- b. ☒ Exhibit B. Statement of Distinctness
- c. ☒ Exhibit C. Objective Description of Variety
- d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☒ Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 20 and 21 below)* ☒ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☒ YES ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER	SIGNATURE OF OWNER
Stephen W. Johnson	
NAME *(Please print or type)*	NAME *(Please print or type)*
Stephen W. Johnson	
CAPACITY OR TITLE: Director of Research — DATE: 7-24-02	CAPACITY OR TITLE — DATE

SET-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete. *(See reverse for instructions and information collection burden statement)*

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

~~22. CONTINUED FROM FRONT~~ *~~(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)~~*

USA August 23, 2001

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

RECEIVED AUG 21

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center–East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

Exhibit A

Origin and Breeding History of Navigator (CIS-FRR5) Strong Creeping Red Fescue

Navigator (CIS-FRR 5) strong creeping red fescue (*Festuca rubra* L. subsp. *rubra*) is a turf-type cultivar selected for medium green color, increased shoot density, leaf spot resistance and improved turf quality from the progenies of 22 clones that trace to six different mother lines.

Eighty-seven percent of the parental germplasm of Navigator traces its origin to plants selected from old turfs of the United States during the period from 1962 through 1990 by turfgrass scientists at the New Jersey Agricultural Experiment Station. A majority of this collected germplasm traces to a single plant found in the Rose City Cemetery, Portland, Oregon. The remaining thirteen percent of Navigators parentage traces to a few plants selected from the cultivar 'Ensylva'.

Plants selected by the New Jersey Agricultural Experiment Station were subjected to evaluation in spaced-plant nurseries, frequently mowed turf trials, and greenhouse test for resistance to powdery mildew (caused by *Erysiphe graminis* DC). Progenies from intercrossing the best performing selections were then subjected to many cycles of recurrent phenotypic selection with each cycle followed by single-plot progeny tests in closely mowed turf trials. Tillers were subsequently selected from the best performing turf plots to initiate additional cycles of selection. Greenhouse facilities were also used to select disease resistant, lower-growing plants with abundant tillers, and a rich, bright, green color.

The most promising plants were identified by their persistence, appearance and performance in spaced-plant nurseries, mowed clonal evaluation tests, and single-plant progeny trails under turf maintenance. Intercrosses of the best performing plants were subjected to varying cycles of phenotypic and genotypic selection depending on their date of collection. New sources of germplasm were added to the breeding program as it became available from the continuing collection program. Each cycle of selection showed continued progress in producing lower-growing, darker green, finer leaf texture, attractive plants with improved turf performance scores.

Single-plot progenies of 250 clones selected from the Rutgers turfgrass breeding program were seeded in individual turf plots at North Brunswick New Jersey during the late summer of 1992. Following one year of evaluation for disease resistance, stress tolerance and improved turf quality, 22 single-plot progenies were selected from this trial. Selection was based on turf performance and appearance of the plots at the time of selection. After intense interplant competition eliminated most of the weaker plants, a total of 210 promising plants were selected from 22 of these turf plots and sent to ~~Cebeco~~ DLF (on 8/18/2005) International Seeds' Research Station near Tangent, Oregon for evaluation in the fall of 1993.

In the summer of 1995 open-pollinated seed was harvested from 31 of the 210 plants and used to plant half-sib rows. Selection of the 31 plants was based on relatively darker green color and a high individual plant seed yield.

In 1997 49 medium-green, later maturing plants with a high number of reproductive tillers were selected from 12 of the 31 half-sib rows and crossed in isolation. Each of the plants was harvested individually and a bulk consisting of equal amounts of seed of each of the twelve highest yielding plants that contained a *Neotyphodium* endophyte was bulked and used to establish a 2000 plant nursery in the fall of 1997.

Prior to anthesis in 1998 approximately 30 % of the plants in the spaced-plant nursery established in 1997 were removed due to one or more of the following characteristics: light green color, susceptibility to leaf spot, or few reproductive tillers. The remaining plants were allowed to inter-pollinate. and constitute the first breeder seed of the variety.

The plants that remained in the nursery were allowed to interpollinate. Seed harvested from these plants was bulk harvested in 1997 and 1998. This seed constitutes the breeder seed for the variety Navigator. A portion of this seed is maintained by ~~Cebeeo DLF~~ (BT:8/18/2005) International Seeds and may be used to plant new foundation seed fields when necessary.

The variety Navigator has appeared uniform and stable during the multiplication from breeder to foundation to certified generation. Navigator has a small percentage (<0.25%) (variants) of plants that are somewhat taller and coarser than the rest of the population. The percentage of these plants appears to be stable when seed is multiplied from breeder through certified generations.

Jas 4/7/05

Exhibit B

Statement of Distinctness

Navigator strong creeping red fescue (*Festuca rubra rubra*) is a medium-late variety developed for use in turf.

Navigator is most similar to the variety Shademaster. Differences between Navigator and Shademaster include, but are not necessarily limited to the following:

1. Navigator has longer vegetative leaves when grown as spaced plants in western Oregon. (36.6 cm vs. 29.2 cm).

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Fine Leaved Fescues)

OBJECTIVE DESCRIPTION OF VARIETY
FINE LEAVED FESCUES
(Festuca spp.)

DLF
Jan 4/7/06

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME.
~~Cebeco~~ International Seeds, Inc. and Rutgers, The State University of New Jersey (engr 8/2006)	CIS-FRR 5	Navigator

ADDRESS *(Street and No. or R.F.D. No., City, State, and Zip Code)*
PO Box 229
Halsey, OR 97348

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PVPO NUMBER
200200231

Place the appropriate number that describes the varietal character of this variety in the boxes below. Use leading zeroes when necessary (e.g., [0][8][9] or [0][9]). Characteristics described including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate system used: 1-5; 5=very dark green Describe location of test area, conditions and number of plants used: Harrisburg, OR 3 replications with 20 plants per replication.

1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)

[3]

1 = *F. rubra ssp. commutata* (Chewings)	11 = Cascade 14 = Banner	12 = Highlight 15 = Barfalla	13 = Jamestown
2 = *F. rubra* ssp. *litoralis* (Creeping Red)	21 = Dawson 24 = Pennlawn	22 = Starlight	23 = Merlin
3 = *F. rubra* ssp. *rubra* (Spreading Red)	31 = Boreal 34 = Ensylva	32 = Ruby	33 = Fortress
4 = *F. ovina* (Sheep)	41 = Covar		
5 = *F. longifolia* (Hard)	51 = Durar	52 = Biljart (C-26)	53 = Scaldis
6 = *F. tenuifolia* (Fine-Leaved Sheep)	61 = Panda	62 = Barok	

7 = Other *(Specify)* *F.* _____

2. CYTOLOGY:

[5][6] Chromosome Number [4] Ploidy 1 = diploid 2 = tetraploid 3 = hexaploid 4 = octoploid

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

[2] Northeast [2] Southeast [2] North Central [2] Pacific N.W. [ ] Other *(Specify)*: _____

4. MATURITY: Date First Headed (panicle emergence) Location(s) of Trait(s) Harrisburg, OR

[4]

Maturity Class:
1 = Very Early (Covar) 2 = Early (Highlight) 3 = Medium Early (Boreal, Dawson)
4 = Medium Late (Cascade, Ruby) 5 = Late (Jamestown, Agram) 6 = Very Late

Date Headed April 30

[0][2]	Days earlier than Cindy	[ ][ ]	Comparison Variety
	Maturity same as	[3][4]	
[0][4]	Days later than	[3][1]	

5. PLANT HEIGHT: (At maturity; to top of panicle; Average of 10 tallest culms)

[7][9][6] mm height

[1][1][9]	mm shorter than Flyer	[ ][ ]	Comparison Variety
	Height same as	[3][4]	
[0][5][4]	mm taller than Cindy Lou	[ ][ ]	

6. GROWTH HABIT: (Mature)

[2] 1 = Erect (Ruby) 2 = Semi-erect (Highlight) 3 = Prostrate (Silvana)

7. RHIZOMES:

[6][1][4] mm Length [1][3] mm Width [1][9] mm Internode length

[3] 1 = Absent (Highlight) 2 = Weakly Creeping (Dawson) 3 = Strongly Creeping (Boreal)
4 = Very Strongly Creeping (Fortress)

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8. LEAF BLADE:

[3] Color: 1 = Light Green (Starlight) 2 = Medium Light Green (Highlight) 3 = Medium Dark Green (Ruby, Agram 4 = Dark Green (Jamestown, Manoir) 5 = Bluegreen (Saphir) 6 = Graygreen (Scaldis) 7 = Other *(Specify)* _____

[1] Glaucosity (Sowing Year): 1 = Absent (Koket) 2 = Present (Vendome)

[2] Anthocyanin: 1 = Absent 2 = Present [1] Hairs (Basal) 1 = Absent 2 = Present

[1] Margins: 1 = Smooth 2 = Semi-rough 3 = Rough

[2] Margin folding (closure): 1 = Rolled inward (closed-Highlight) 2 = Flat (open-Jamestown, Engina)

[3] Width class: 1 = Very Fine (Agram, Frida) 2 = Fine (Jamestown, Highlight, Banner, Dawson) 3 = Medium Fine (Fortress, Ruby, Scaldis) 4 = Medium Coarse (Engina)

[1][3][7] mm Length (flag leaf)

[ ][ ] mm Shorter than . N/A . . . [ ][ ]

Blade length same as . . . . . [3][1] } Comparison Variety

[3][7] mm Longer than . . . . . [3][4] }

[2][9][7] mm Width (flag leaf)

[ ][ ][ ] mm Narrower than . N/A . . . [ ][ ]

Blade width same as Shademaster [ ][ ] } Comparison Variety

[ ][ ][ ] mm Wider than . . N/A . . . [ ][ ] }

9. LEAF SHEATH:

[2] Anthocyanin (seedling): 1 = Absent (Highlight) 2 = Present (Jamestown, Fortress, Marga)

[1] Auricle Hairiness: 1 = Absent 2 = Present

[2] Margins: 1 = Open (Highlight) 2 = Closed (Jamestown)

10. PANICLE (Mature plant):

[2] Shape: 1 = Narrow-tapering 2 = Ovate 3 = Oblong 4 = Other *(Specify)* _____

[2] Type: 1 = Open 2 = Intermediate 3 = Compact

[1] Orientation: 1 = Erect 2 = Nodding

[1] Branch Pubescence: 1 = Glabrous 2 = Pubescent

[1] Anther Color:

[3] Glume Color (At 50% flowering): } 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6 = Other *(Specify)* _____

[1][5][7] mm Length

[ ][ ] mm Shorter than N/A . . . [ ][ ]

Panicle length same as . . . . . [3][1] } Comparison Variety

[4][0] mm Longer than Cindy Lou . . [ ][ ] }

11. PALEA:

[3] Hairs (On keels or margins): 1 = Absent (Banner) 2 = Short (Agram, Scaldis, Olds) 3 = Long (Rainier, Fortress, Jamestown)

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12. LEMMA (Mature):

3 Hairs: 1 = Absent (Jamestown) 2 = Several 3 = Many (Highlight)

6.7 mm Lemma Length

0.6 mm Shorter than 3.1

Lemma length same as Shademaster

mm Longer than N/A . . . .

1.1.3 mm Lemma Width

mm Narrower than N/A . . . . .

Lemma width same as Shademaster

mm Wider than N/A . . . . . Comparison Variety

2 Awns: 1 = Absent 2 = Present

2.1 mm Awn Length

mm Shorter than N/A. . . . .

Awn length same as Shademaster

mm Longer than N/A. . . . Comparison Variety

13. SEED (With lemma & palea):

4 Size Class (g/1000 seed):
1 = <.9g (Biljart, Dawson) 2 = .9 – < 1.1g (Jamestown, Highlight)
3 = 1.1 – 1.3g (Fortress, Novorubra) 4 = >1.3g (Boreal, Golfrood)

1.4.2.0 mg per 1000 seed

mg per 1000 seed less than N/A . . . .

Seed Weight same as Shademaster . .

mg per 1000 more than N/A . . . Comparison Variety

14. DISEASE, INSECT, AND NEMATODE REACTION (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

0 Melting-out *Drechslera poae* (*Helminthosporium vagans*)
0 Leaf spot *D. siccans*
0 Net blotch *D. dictyoides*
0 Leaf spot *Bipolaris sorokiniana*
2 Brown patch *Rhizoctonia solani*
0 Powdery mildew *Erysiphe graminis*
0 Stripe smut *Ustilago striiformis*
2 F. Patch, Pink snow-mold *Fusarium nivale*
0 Fusarium blight *F. tricinctum, F. roseum*
0 Gray snow mold *Typhula iotana*
0 Stem rust *Puccinia graminis*

0 Stripe rust *P. striiformis*
0 Leaf rust *P. poae-nemoralis*
0 *P. crandallii*
2 Pythium Blight *Pythium ultimum*
2 Red thread *Corticium fusciforme*
0 Dollar spot *Sclerotinia homoeocarpa*
Insect _____
Nematode _____
Other _____
Other _____
Other _____

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15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate Degree of Resemblance by placing the column marked, D.R., one of the following numbers:

1 = Application variety is less than comparison variety. 2 = Same As
3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
Rhizome Length			Growth Habit	Shademaster	2
Leaf Width	Shademaster	2	Leaf Color	Shademaster	3
Panicle Color			Panicle Shape	Shademaster	2
Winter Color			Cold Injury		
Shade Tolerance			Heat		
Drought			Disease*		

* *Specify each disease evaluated.*

16. ADDITIONAL DESCRIPTION: (Use additional sheets as required)
Describe all characteristics that cannot be adequately described in the form above in Exhibit D. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease tests.

Exhibit D
Table 1. Heading dates of strong creeping red fescue varieties grown near Harrisburg Oregon.

Heading dates of strong creeping red fescues grown near Harrisburg, Oregon

	Heading Date		
Variety	2000	2001	Average
Shademaster	April 25	April 27	April 26
Boreal	April 25	April 26	April 26
Cindy Lou	April 27	April 30	April 29
Ensylva	April 29	April 30	April 30
Navigator	**April 28**	**May 2**	**April 30**
Cindy	May 1	May 2	May 2

EXHIBIT D

Table 1.

Morphological traits of strong creeping red fescue varieties grown near Harrisburg, Oregon

	Plant Height (cm)			Panicle Length (cm)			1st Internode Length (cm)			2nd Internode Length (cm			Flag Leaf Length (cm)		
Variety	2000	2001	Average	2000	2001	Average	2000	2001	Average	2000	2001	Average	2000	2001	Average
Flyer	91.13	91.93	91.53	15.50	14.98	15.24	42.06	46.29	44.18	18.79	15.02	16.91	10.80	13.08	11.94
Boreal	83.72	88.85	86.29	15.97	15.28	15.63	38.77	44.71	41.74	17.01	16.00	16.50	11.73	14.35	13.04
Shademaster	83.17	83.07	83.12	15.20	14.69	14.95	37.89	43.91	40.90	17.25	15.53	16.39	11.87	11.93	11.90
Navigator	**77.98**	**81.12**	**79.55**	**15.39**	**15.91**	**15.65**	**33.29**	**40.35**	**36.82**	**16.27**	**13.25**	**14.76**	**13.68**	**13.79**	**13.74**
Ensylva	78.37	80.66	79.51	13.98	15.93	14.96	37.63	42.43	40.03	16.06	13.29	14.68	9.38	10.61	10.00
Cindy	74.97	78.82	76.89	13.74	14.53	14.14	35.26	37.20	36.23	17.30	12.79	15.05	9.21	10.78	10.00
Cindy Lou	73.22	75.24	74.23	11.58	11.53	11.56	36.41	39.59	38.00	13.66	11.65	12.66	8.64	10.92	9.78
LSD	6.73	10.21		1.65	1.81		8.15	8.31		3.50	3.31		3.20	2.32	

EXHIBIT D

Table 3.
Additional Morphological traits of strong creeping red fescue varieties grown near Harrisburg, Oregon

Variety	Flag Leaf Width (mm)			Tiller Leaf Length (cm)			Tiller Leaf Width (mm)			Veg. Leaf Length (cm)		
	2000	2001	Average	2000	2001	Average	2000	2001	Average	2000	2001	Average
Flyer	2.68	2.04	2.36	11.48	12.62	12.05	2.88	1.80	2.34	32.18	25.10	28.64
Boreal	3.43	2.27	2.85	11.24	13.68	12.46	2.97	2.06	2.51	34.17	27.00	30.59
Shademaster	2.82	2.17	2.50	12.58	12.13	12.36	2.32	1.99	2.15	33.10	25.40	29.25
Navigator	**2.97**	**2.31**	**2.64**	**13.96**	**14.76**	**14.36**	**2.82**	**2.13**	**2.48**	**39.16**	**34.03**	**36.59**
Ensylva	2.45	1.74	2.09	9.03	11.41	10.22	2.33	1.68	2.00	31.21	24.81	28.01
Cindy	2.43	2.23	2.33	8.75	11.48	10.12	2.60	1.96	2.28	28.04	22.92	25.48
Cindy Lou	2.12	2.32	2.22	9.54	11.11	10.33	2.14	2.06	2.10	29.42	27.03	28.22
LSD	0.69	0.51		2.04	2.01		0.64	0.53		5.65	5.86	

EXHIBIT D

Table 4.
Seed characteristics of strong creeping red fescue varieties grown near Harrisburg, Oregon

Variety	10 Seed Length (mm)			10 Seed Width (mm)			Awn Length (mm)			1000 seed wt (g)		
	2000	2001	Average	2000	2001	Average	2000	2001	Average	2000	2001	Average
Boreal	70.70	75.33	73.02	12.00	10.67	11.33	2.17	2.19	2.18	1.71	1.30	1.51
Flyer	68.00	74.33	71.17	12.67	10.67	11.67	2.57	2.03	2.30	1.83	1.34	1.58
Ensylva	68.67	69.33	69.00	11.00	11.00	11.00	2.71	1.89	2.30	1.68	1.25	1.47
Cindy	64.67	71.67	68.17	11.67	10.67	11.17	2.16	1.74	1.95	1.68	1.06	1.37
Shademaster	65.00	69.67	67.33	11.67	10.33	11.00	2.31	1.68	2.00	1.81	1.20	1.51
Navigator	**64.67**	**69.00**	**66.84**	**11.67**	**11.00**	**11.34**	**2.63**	**1.63**	**2.13**	**1.69**	**1.14**	**1.42**
Cindy Lou	61.00	67.00	64.00	11.67	11.00	11.34	2.29	1.39	1.84	1.61	1.29	1.45
LSD @ 0.05	5.82	5.59		NS	NS		NS	0.43		0.18	0.20	

2002231

REPRODUCE LOCALLY. Include form number and edition date on all reproductions. FORM APPROVED - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

1. NAME OF APPLICANT(S)

7a9 DLF
~~Cebeco~~ International Seeds, ~~Inc.~~ and Rutgers, The State University of New Jersey (BT:8/18/2005)
4/7/05

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER: CIS-FRR 5

3. VARIETY NAME: Navigator

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP and Country)*

PO Box 229/175 West 'H' Street
Halsey, OR 97348
USA

5. TELEPHONE *(Include area code)*: 541-369-2251

6. FAX *(Include area code)*: 541-~~369-2640~~ 929-4084 (BT:8/18/2005)

7. PVPO NUMBER: 200200231

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain [X] YES [ ]

9. Is the applicant (individual or company) a U.S. National or a U.S. based company? If no, give name of country [X] YES [ ] NO

10. Is the applicant the original owner? [X] YES [ ] NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

[ ] YES [ ] NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

[ ] YES [ ] NO If no, give name of country

11. Additional explanation on ownership *(If needed, use the reverse for extra space)*:

Navigator was developed by Cebeco International Seeds, Inc. using germplasm obtained from the New Jersey Agricultural Experiment Station.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.